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Improving Assessments and Evaluations of Pilots in Collegiate Aviation Programs

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Good Morning

March 3, 2020

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AVIATION



Improving Assessments and Evaluations of Pilots in Collegiate Aviation Programs

March 3, 2020

ERAU Daytona

Dr. Dittmer is an active CFI in a Collegiate Aviation Program. He has conducted and served in an evaluation capacity for both Collegiate Aviation Programs and Civil Air Patrol Pilots for over 30 years.

Currently, Dr. Dittmer is a Master CFI with the National Association of Flight Instructors, and teaches CFR 141 ground schools for private, instrument, and CFI's.



- The purpose of this proposed study is to improve assessments and evaluation techniques of student pilots in collegiate aviation programs.



- Proper evaluation and assessment of student pilot performance in collegiate aviation programs is important to the success and credibility of the training program.

- Students in pilot training programs are scrutinized unlike other students in other academic programs. There exists well defined program evaluation cycles, specific skills and knowledge to be tested, objective criteria on which to judge performance, tight restrictions on evaluator qualifications, and well defined curriculum for creating an evaluation context.

- This researcher would look at three reasons student pilots are evaluated.

First

- To decide whether an individual pilot is proficient to fly.
- Decisions involving the student pilots ability to proceed in the degree to graduation warrant the highest quality performance evaluation.

Second

- Instructors need to assess their trainees knowledge and skill to offer appropriate feedback and remediation.
- The quality of pilot training depends on evaluators being capable of making accurate judgements of performance.

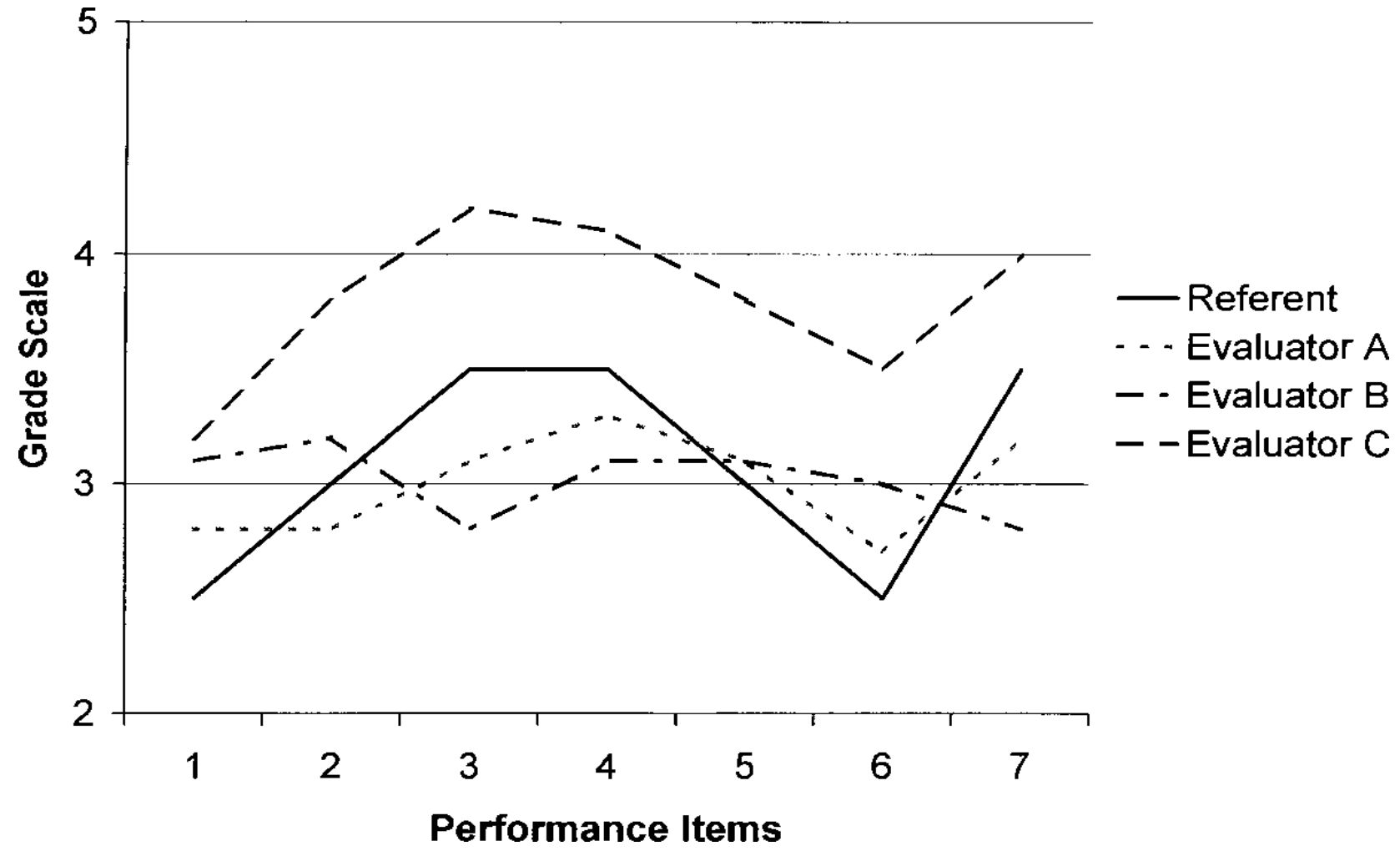
Third

- Student pilot evaluations should guide the development and modification of training programs.

Student Performance Data

- We assume that the distribution of task grades given for a group of student pilots by all evaluators reflects true performance, along with the schools established grading policies.
- If we can also assume that a single evaluator has graded a relatively large and representative sample of the pilots in a particular fleet, not uncommon for large schools, then an individual evaluator's grade distribution should resemble the statistical characteristics of the corresponding population of evaluators.
- Deviations from the population distribution indicate that the evaluator is judging pilot performance differently from his fellow evaluators.

- A second major type of analysis of student pilot performance data is a correlational analysis. The correlational structure of a set of performance items indicates which items vary together, presumably because the different items measure a common underlying skill.
- By examining the pattern of covariation over a large set of performance items taken from a large sample of observations, one could obtain a reasonably accurate assessment of the quality of this dimension of an evaluator's grades.



Summary and Future Directions

- The evaluation of human performance in highly skilled jobs, such as commercial flying, is still largely a human activity and, as such, retains an inherently subjective component. However, these evaluations play critical roles in deciding the careers of pilots, ensuring the safety of commercial flying, and designing and modifying training programs. Hence, it is critical that these performance judgments be of the highest quality. Fortunately, much can be done to ensure that these human judgments are accurate and reliable.



Questions ?

